IN THE CLAIMS:

1. - 6. (Cancelled).

7. (Previously presented) A method for selecting a solution to a linear optimization problem for fuel-optimized selection of a configuration of thrusters on a spacecraft comprising:

finding a first permissible calculation of said solution in an initialization phase; and

performing an iterative optimization of an effectiveness criterion in a subsequent iteration phase, said subsequent iteration phase having at least one iteration and providing a subsequent permissible calculation of said solution;

wherein a scaled iteration gradient is formed with said at least one iteration, and

wherein said scaled iteration gradient is multiplied with a limiting factor for a maximum iteration interval width, said maximum iteration interval width being formed while taking at least one boundary value condition for said subsequent permissible solution into account.

8. (Previously presented) The method of claim 7, wherein an upper bound for said at least one boundary value condition is defined.

9. (Previously presented) The method of claim 7, wherein said scaled iteration gradient is determined by a Gauss elimination.

10. (Previously presented) The method of claim 7, wherein a gradient component of said scaled iteration gradient becomes smaller in a current iteration of said at least one iteration as an appropriate component of said subsequent permissible solution comes closer to one of said at least one boundary value condition in a previous iteration of said at least one iteration.

11. (Previously presented) The method of claim 7, wherein said subsequent iteration phase is terminated after a current iteration of said at least one iteration when an appropriate component of said subsequent permissible solution exceeds one of said at least one boundary value condition, and wherein a result of a previous of at least one iteration is determined as an optimal solution of said effectiveness criterion.

12. (Previously presented) The method of claim 7, wherein said subsequent iteration phase is terminated after a current iteration of said at least one iteration when a current result of said effectiveness criterion differs from a previous result of said effectiveness criterion in a previous of said at least one iteration by less than a pre-defined distance, and wherein said previous result is determined as an optimal solution of said effectiveness criterion.

13. (Previously presented) A method for selecting a solution to a linear optimization problem for fuel-optimized selection of a configuration of thrusters on a spacecraft comprising:

producing an initial result of said solution; and

calculating, in at least one iteration, a subsequent result of said solution by optimization of an efficiency criterion.

14. (Previously presented) The method of claim 13, wherein a scaled iteration gradient is formed in said at least one iteration.

15. (Previously presented) The method of claim 14, wherein said scaled iteration gradient is multiplied with a limiting factor for a maximum iteration interval width, said maximum iteration interval width being formed while taking into account at least one boundary value condition for said subsequent result of said solution.

16. (Previously presented) The method of claim 15, wherein said at least one boundary value condition comprises an upper bound.

17. (Previously presented) The method of claim 15, wherein said scaled iteration gradient is determined by a Gauss elimination.

18. (Previously presented) The method of claim 15, wherein a gradient component of said scaled iteration gradient becomes smaller in a current iteration of said at least one iteration as an appropriate component of said subsequent result of said solution comes closer to one of said at least one boundary value condition in a previous iteration of said at least one iteration.

19. (Previously presented) The method of claim 15, wherein said calculating is terminated after a current iteration of said at least one iteration when an appropriate component of said subsequent result of said solution exceeds one of said at least one boundary value condition, and wherein a result of a previous iteration of at least one iteration is determined as an optimal solution of said effectiveness criterion.

20. (Previously presented) The method of claim 15, wherein said calculating is terminated in after a current iteration of said at least one iteration when a current result of said effectiveness criterion differs from a previous result of said effectiveness criterion, said previous resulted generated in a previous iteration of said at least one iteration, by less than a pre-defined distance, and wherein said previous result is determined as an optimal solution of said effectiveness criterion.

21. (Previously presented) The method of claim 16, wherein a gradient component of said scaled iteration gradient becomes smaller in a current

iteration of said at least one iteration as an appropriate component of said subsequent result of said solution comes closer to one of said at least one boundary value condition in a previous iteration of said at least one iteration.

22. (Previously presented) The method of claim 16, wherein said calculating is terminated after a current iteration of said at least one iteration when an appropriate component of said subsequent result of said solution exceeds one of said at least one boundary value condition, and wherein a result of a previous iteration of at least one iteration is determined as an optimal solution of said effectiveness criterion.

23. (Previously presented) The method of claim 16, wherein said calculating is terminated after a current iteration of said at least one iteration when a current result of said effectiveness criterion differs from a previous result of said effectiveness criterion, said previous resulted generated in a previous iteration of said at least one iteration, by less than a pre-defined distance, and wherein said previous result is determined as an optimal solution of the effectiveness criterion.

24. (Previously presented) The method of claim 17, wherein a gradient component of said scaled iteration gradient becomes smaller in a current iteration of said at least one iteration as an appropriate component of said subsequent result of said solution comes closer to one of said at least one boundary value condition in a previous iteration of said at least one iteration.

25. (Previously presented) The method of claim 17, wherein said calculating is terminated after a current iteration of said at least one iteration when an appropriate component of said subsequent result of said solution exceeds one of said at least one boundary value condition, and wherein a result of

a previous iteration of at least one iteration is determined as an optimal solution of said effectiveness criterion.

26. (Previously presented) The method of claim 17, wherein said calculating is terminated in after a current iteration of said at least one iteration when a current result of said effectiveness criterion differs from a previous result of said effectiveness criterion, said previous resulted generated in a previous iteration of said at least one iteration, by less than a pre-defined distance, and wherein said previous result is determined as an optimal solution of said effectiveness criterion.

27. (New) A method for selecting a solution to a linear optimization problem for fuel-optimized selection of a configuration of thrusters on a spacecraft comprising:

finding a first permissible calculation of said solution in an initialization phase;

performing an iterative optimization of an effectiveness criterion in a subsequent iteration phase, said subsequent iteration phase having at least one iteration and providing a subsequent permissible calculation of said solution; and

using said solution to carry out said fuel-optimized selection of said configuration of thrusters on said spacecraft;

wherein a scaled iteration gradient is formed with said at least one iteration, and

wherein said scaled iteration gradient is multiplied with a limiting factor for a maximum iteration interval width, said maximum iteration interval width being formed while taking at least one boundary value condition for said subsequent permissible solution into account.

28. (New) A method for selecting a solution to a linear optimization problem for fuel-optimized selection of a configuration of thrusters on a spacecraft comprising:

producing an initial result of said solution;

calculating, in at least one iteration, a subsequent result of said solution by optimization of an efficiency criterion; and

using said solution to carry out said fuel-optimized selection of said configuration of thrusters on said spacecraft.

29. (New) An apparatus for selecting a solution to a linear optimization problem for fuel-optimized selection of a configuration of thrusters on a spacecraft comprising:

means for finding a first permissible calculation of said solution in an initialization phase; and

means for performing an iterative optimization of an effectiveness criterion in a subsequent iteration phase, said subsequent iteration phase having at least one iteration and providing a subsequent permissible calculation of said solution;

wherein a scaled iteration gradient is formed with said at least one iteration, and

wherein said scaled iteration gradient is multiplied with a limiting factor for a maximum iteration interval width, said maximum iteration interval width being formed while taking at least one boundary value condition for said subsequent permissible solution into account.

30. (New) A system for selecting a solution to a linear optimization problem for fuel-optimized selection of a configuration of thrusters on a spacecraft comprising:

means for producing an initial result of said solution; and

means for calculating, in at least one iteration, a subsequent result of said solution by optimization of an efficiency criterion.